

Before the
FEDERAL COMMUNICATIONS COMMISSION
 Washington, D.C. 20554

FEB 13 2004

FEDERAL COMMUNICATIONS COMMISSION
 OFFICE OF THE SECRETARY

In the Matter of:)	
)	
Implementation of Section 304 of the)	CS Docket No. 97-80
Telecommunications Act of 1996)	
)	
Commercial Availability of Navigation)	
Devices)	PP Docket No. 00-67
)	
Compatibility Between Cable Systems and)	
Consumer Electronics Equipment)	
)	
In the Matter of Digital Broadcast)	MB Docket No. 02-230
Content Protection)	
)	

FURTHER COMMENTS OF DIRECTV, INC.

DIRECTV, Inc. ("DIRECTV")¹ hereby offers the following additional comment in response to the Commission's Further Notices of Proposed Rulemaking in the above-captioned proceedings.²

I. INTRODUCTION & SUMMARY

DIRECTV is the United States' largest provider of DBS service, with more than 12.2 million subscribers nationwide, the nation's second largest multichannel video programming distributor ("MVPD"), and a leading provider of digital subscription television programming.

¹ DIRECTV is a wholly-owned subsidiary of DIRECTV Enterprises, LLC, a licensee in the DBS service and wholly-owned subsidiary of Hughes Electronics Corporation.

² See Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment, *Second Report and Order and Second Further Notice of Proposed Rulemaking*, CS Docket No. 97-80, PP Docket No. 00-67 (rel. Oct. 9, 2003) ("Plug and Play Order & Second Further Notice"); In the Matter of Digital Broadcast Content Protection, *Report and Order and Further Notice of Proposed Rulemaking*, MB Docket No. 02-230 (rel. Nov. 4, 2003) ("Broadcast Flag Further Notice"). Because the Commission has recognized some overlap in the subject matter of these two Further Notices, *see, e.g., Broadcast Flag Further Notice* at ¶ 62, DIRECTV is filing a copy of these Further Comments in each docket.

DIRECTV has been a leading proponent of the Commission's efforts to introduce and proliferate high-definition television ("HDTV") programming for the viewing enjoyment of U.S. consumers. For example, in 1998, DIRECTV led the MVPD industry in offering the first nationally-distributed HDTV programming channels.³ DIRECTV worked with several consumer electronics manufacturers to become the first MVPD to offer HDTV set-top boxes with integrated ATSC tuners for the reception of digital terrestrial broadcasts. And DIRECTV was also the first MVPD to implement a Digital Visual Interface ("DVI").

This proceeding is an important one for several different industries in encouraging the digital transition. DIRECTV has expressed previously its dismay at the exclusive nature of the process to date, and the failure of the cable and consumer electronics industries to include certain key constituencies, such as content providers and DBS operators, "at the table" for the discussions that ultimately led to the Commission's adoption of the *Plug and Play Order and Second Further Notice*.⁴ DIRECTV is hopeful that the cable and consumer electronics industries will heed the Commission's admonition they include content providers and DBS operators, among others, in all future discussions on these and related topics.⁵

In any event, DIRECTV has examined the issues upon which the Commission has requested further comment in the *Plug and Play Order and Second Further Notice*, offers its

³ DIRECTV currently offers HBO HD, HD Net, HD Net Movies, Showtime HD, Discovery HD, ESPN HD, a 24 Hour HD PPV movie channel, and CBS East and West HD network feeds (where available), as well as ad hoc HD content such as NCAA basketball games in the 2003 March Madness NCAA College Basketball Tournament.

⁴ See Petition for Reconsideration of DIRECTV, Inc., CS Docket No. 97-80 (Dec. 29, 2003), at 8-9; Ex Parte Letter from Eddy W. Hartenstein, CEO, DIRECTV, Inc. and Charles W. Ergen, CEO, EchoStar Communications Corp. to Hon. Michael Powell, Chairman, FCC (Sept. 3, 2003); Comments of DIRECTV, CS Docket No. 97-80 (Mar. 28, 2003).

⁵ See *Plug and Play Order and Second Further Notice* at ¶ 8, n. 22. See also *Statement of Commissioner Kevin J. Martin* (noting concerns of interested parties that were excluded from the initial MOU process, and strongly encouraging that "all interested parties be allowed to participate in setting the groundwork for any necessary rules") (emphasis in original).

views below, and respectfully requests that they be considered by the Commission. First, DIRECTV recommends strongly that the Commission permit the down-resolution by MVPDs of non-broadcast programming. Assuring content providers that their high-value content will be protected is an extremely important step in encouraging the proliferation of such content in the MVPD marketplace. Acknowledging that the Commission is attempting in its Plug and Play regime to balance the interests of multiple constituencies – content providers, consumer electronics manufacturers, distributors and consumers – this content protection measure is consumer-friendly and should be incorporated into the Commission’s regulatory framework.

Second, the Commission will commit a serious error if it designates CableLabs, a consortium that is wholly-owned and controlled by the cable industry, as the “sole initial arbiter of outputs and associated content protection technologies to be used in” unidirectional MVPD products.⁶ The *Plug and Play Order & Second Further Notice* already registers the concern that CableLabs’ assumption of this important gatekeeping role could negatively “affect innovation and interoperability in a number of areas.”⁷ DIRECTV believes that this concern is valid and should be dispositive. In analogous contexts, such as program access, the Commission has been extremely wary of the harm to non-cable MVPDs specifically and MVPD competition generally that can flow from setting up a cable-affiliated gatekeeper to an important input. The Commission relatively recently has re-affirmed its conclusion, for example, that “vertically integrated programmers retain the incentive to favor their affiliated cable operators over competitive MVPDs such that competition and diversity in the distribution of video

⁶ *Plug and Play Order & Second Further Notice* at ¶¶ 78-79, 83.

⁷ *Id.* at ¶ 78.

programming would not be preserved and protected.”⁸ That precise concern applies to the proposed role of CableLabs here. The Commission should instead choose or establish a qualified, *independent* third party entity for the purpose of serving as the sole initial arbiter of outputs and associated content protection technologies.

Finally, DIRECTV strongly urges the Commission to defer to the marketplace to continue to develop standards and procedures for the approval of new connectors and content protection technologies, or to provide for remedial measures should such connectors and technologies break down. Given the pace of technological change and convergence in the MVPD marketplace, including in the areas of distribution and content protection technology, the best policy at this juncture is for the Commission to grant the MVPD, consumer electronics and content industries maximum leeway both to innovate and to address problems as they arise.

II. THE COMMISSION SHOULD ALLOW THE DOWN-RESOLUTION OF NON-BROADCAST MVPD PROGRAMMING

The *Plug and Play Order & Second Further Notice* seeks additional comment as to whether the down-resolution of non-broadcast MVPD programming should be a permissible content protection tool under the Commission’s new Plug and Play framework.⁹ DIRECTV does not believe that the Commission is serving the interests of consumers in the long run by prohibiting MVPDs from implementing this form of content protection.

Even the consumer electronics industry has acknowledged that the technique of down-resolution is an accepted MVPD industry practice that has been required in private agreements, such as the Digital Transmission Content Protection (“DTCP” or “5C”) license, in order to

⁸ *In the Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992; Development of Competition and Diversity in Video Programming Distribution: Section 628(c)(5) of the Communications Act; Sunset of Exclusive Contract Prohibition*, 17 FCC Rcd 12124 (2002) (“Program Access Extension Order”), at ¶ 4

⁹ *Plug and Play Order & Second Further Notice* at ¶ 82.

address situations in which component analog outputs are used as secondary ports to feed high-definition video recorders.¹⁰ Furthermore, NCTA has expressed the policy concern, noted in the *Plug and Play Order and Second Further Notice*, that the preservation and adoption of this form of content protection could be very important, as content providers will not make high-value non-broadcast content available unless an MVPD can lower its resolution over component analog outputs.

The NCTA's concern is consistent with DIRECTV's experience. The vulnerability of content delivered over analog outputs is an issue of tremendous concern that has been vocalized by content providers, both in private negotiations and public forums. If an MVPD cannot assure that a content provider will have adequate copy protection for high-value digital content, the content provider will simply refuse to make such content available on that MVPD's system, and instead rely on competing distribution vehicles that are not fettered with similar restrictions, such as DVDs or cable modems. That is why DIRECTV has been an advocate for the deployment of a wide arsenal of content protection techniques in the MVPD marketplace, including selectable output control and down-resolution.

The Commission has chosen to prohibit the use of selectable output control as a copy protection mechanism at this time.¹¹ While DIRECTV disagrees with that decision, and in the absence of a mutually-agreed mandatory retirement of high definition analog outputs, down-resolution is the only other consumer-friendly means to address the vulnerability of content delivered over such outputs.

¹⁰ *Id.* at ¶ 62.

¹¹ *Id.* at ¶¶ 60-61.

As the Commission has suggested, “down-resolution” generally means degrading the resolution of content from high definition to a lower resolution, such as standard definition.¹² Thus, this content protection measure allows consumers with analog inputs on their equipment to potentially receive a lower quality, but still viewable picture.¹³ Indeed, DIRECTV would point out that “lower” quality in this context is well above “viewable” – down-resolution in previous versions of the DFAST license can still be at 520,000 pixels, which is a very good picture quality relative to the capability of current digital television equipment that has only analog outputs.

DIRECTV understands the Commission’s desire to protect consumer expectations regarding digital cable ready televisions. It is also in the interest of both the distributor and content owner to provide the customer with the best viewing experience possible. However, to the extent that resolution may suffer somewhat for some consumers during the digital transition, it is a small price to pay to ensure that high-value content is made available to all consumers in what is admittedly a “difficult balancing of interests.”¹⁴ As long as a threshold good quality picture is received by the customer, the Commission should not intervene to dictate picture resolution by regulatory fiat to a point where it ceases to become a business issue calibrated by the marketplace. Just as a distributor is able to set the conditions of purchase for a pay-per-view movie, a content provider generally should be able to set the conditions for the secure distribution of that content.

If the Commission validates down-resolution as an acceptable copy protection technique under its Plug and Play regime, it should ensure that the implementation issues experienced by particular types of MVPDs are taken into account in any rules that are adopted on this point. For

¹² *Id.* at ¶ 62.

¹³ *See id.* at ¶ 64.

¹⁴ *Id.* at ¶ 60.

example, DIRECTV's first high-definition television ("HDTV") set-top boxes are designed to support down-resolution insofar as content that may be precluded from the high-definition analog inputs always remains available to the customer in standard definition via the standard definition analog outputs on the set-top box. However, viewers owning those initial legacy units are instructed to and must physically switch television inputs to enjoy the program.

(DIRECTV's current generation of HDTV set-top boxes now supports down-resolution via the high-definition analog outputs, so that the viewer is not required to switch television inputs in this fashion. Digital outputs are encrypted and not subject to down-resolution.)

DIRECTV believes that any rules ultimately adopted by the Commission need to account for this legacy set-top box issue. If they do not, then content providers will be extremely reluctant, if not absolutely unwilling, to permit DIRECTV to carry high-value HDTV programming at all, knowing that DIRECTV is precluded from exercising copy protection measures for a subset of DIRECTV set-top boxes that have been deployed commercially. Accordingly, DIRECTV urges the Commission in its rules to allow for (i) down-resolution via high-definition analog outputs, *and* (ii) down-resolution to alternate analog outputs when the content can only be made available to viewers through analog inputs due to technology limitations.¹⁵

If the Commission does not permit down-resolution, it would penalize both (1) consumers who were early adopters of DIRECTV HDTV set-top boxes with this capability, and (2) DIRECTV's innovation in developing and deploying that technology, placing DIRECTV at a disadvantage when compared with other MVPDs and distributors of high-value content. DIRECTV would have to choose between not offering high-value content to any customers, or

¹⁵ Thus, to the extent that Rule 76.1903 is revised to permit down-resolution, the Commission should ensure that the text of the revised rule captures both of these points.

offering such high-value content only to DIRECTV HDTV set-top boxes with no high-definition analog outputs. The former case yields a negative outcome for all consumers and in particular for consumers with protected digital outputs (who, while possessing appropriate copy protection equipment, are nevertheless denied access to high-value content via their DIRECTV systems). The latter case yields a negative outcome for consumers whose displays do not have protected digital inputs; because their displays will not be compatible with the DIRECTV HDTV outputs, these customers will be denied access to *all* of the most attractive HD content delivered by DIRECTV. Thus, in both cases, the customers are harmed as they have fewer options for obtaining HDTV content. And in both cases, DIRECTV is also harmed because its customers will have no option but to obtain high-value HD content and HDTV services through other means, such as high-definition DVDs and broadband Internet access.

The best way that the Commission can address concerns about the availability of high-value digital content to televisions supporting analog inputs only is by mandating that all digital conversion or recording devices support a Copy Generation Management System - Analog ("CGMS-A), by which basic copy protection information is delivered over the high-definition analog video interface through vertical blanking interval ("VBI") data. CGMS-A has been standardized by the Electronic Industries Alliance/Consumer Electronics Association ("EIA/CEA") in the EIA-805A standard, also known as CEA-805A. Not only does every DIRECTV HDTV set-top box ever produced support CGMS-A in compliance with this standard, there is significant industry support for the use of CGMS-A.¹⁶

¹⁶ For example, in response to a Call for Information ("CFI") by the Analog Re-conversion Discussion Group ("ARDG"), part of the Content Protection Technical Working Group ("CPTWG"), two of the nine respondents to the CFI proposed a technical solution compatible with EIA-805A for protecting analog outputs. One is a submission by seven consumer electronics companies (Matsushita, Mitsubishi, Hitachi, JVC, Samsung, Thomson, Toshiba) and Intel advocating the use of existing CGMS specifications such as EIA-805.

With the protection of a Commission mandate requiring CGMS-A support in digital conversion and recording devices, content providers will be more confident that their high-value digital content will not be recorded. Such a mandate in fact would lessen the prospect that an MVPD would need to utilize down-resolution as a copy protection technique, enabling all customers to enjoy high-value content at its fullest resolution.¹⁷

Finally, although DIRECTV believes that it is important for the Commission to permit the use of down-resolution, the agency should not do so selectively. If the Commission decides to preclude the use of down-resolution by MVPDs entirely, as it did with selectable output control, or to regulate the application of down-resolution, it should ensure to the extent possible that all MVPDs and all other video delivery mechanisms, such as the Internet and recorded media distribution, are subject to the same restriction(s), so that all constituencies in the Plug and Play regulatory regime are treated fairly and equally. In particular, incumbent cable operators should not escape Commission regulation simply by delivering certain HDTV content using Internet protocols, which could easily be accomplished via a unified user interface on exactly the same digital cable set-top box being used to deliver other digital and non-digital cable television services. This asymmetry would totally skew any Commission efforts to establish competitive

The other is a submission from Veil Technologies, which has proposed a more secure utilization in which a single bit watermark (the rights assertion mark) encoded within the visible video lines would indicate the presence of CGMS or other copy control information ("CCI") such as a retransmission control bit. See <http://www.cptwg.org/Assets/Presentations/ARDG/ARDG-10-03>.

¹⁷ With respect to non-broadcast programming, DIRECTV's goal is to provide (i) high-value digital content, (ii) at a high resolution, (iii) on high-definition display devices with analog outputs for so long as they persist in the MVPD marketplace. DIRECTV's encrypted digital interfaces achieve goals (i) and (ii). DIRECTV's analog interfaces with down-resolution achieve goals (ii) and (iii). DIRECTV's use of CGMS output encoding on analog interfaces achieves all three goals. But goal (iii) in general will not be achieved in the absence of a Commission mandate of the CGMS enabling technology – the introduction of products such as high-definition personal video recorders ("PVRs") with analog inputs but without CGMS copy control, in DIRECTV's view, will only continue to impede the digital transition.

parity in the MVPD marketplace, and indeed, exacerbate incumbent cable operators' current MVPD market power.

III. THE COMMISSION SHOULD NOT SET UP CABLELABS AS THE SOLE INITIAL ARBITER OF OUTPUTS AND ASSOCIATED CONTENT PROTECTION TECHNOLOGIES TO BE USED IN UNIDIRECTIONAL MVPD PRODUCTS

The *Plug and Play Order & Second Further Notice* identifies several potential roles for CableLabs in the Commission's new plug and play regulatory regime. Among these are managing changes of the DFAST license,¹⁸ and acting as "the sole initial arbiter of outputs and associated content protection technologies to be used in unidirectional digital cable products."¹⁹ DIRECTV, in a separate petition, has asked the Commission to reconsider CableLabs' role with respect to managing changes to the DFAST license.²⁰ Here, DIRECTV urges the Commission not to enshrine CableLabs as the *de facto* gatekeeper to innovation and interoperability in the MVPD marketplace with respect to unidirectional digital MVPD devices.²¹

By way of example, as EchoStar observes, DBS operators may be able to negotiate with content providers for the distribution of programming using content protection technology that the cable industry is either unable or unwilling to implement.²² But as a self-described "consortium that is dedicated to helping its cable operator members integrate new cable telecommunications technologies into their business objectives,"²³ CableLabs cannot possibly be expected to have the institutional capability of rendering a neutral assessment or determination in

¹⁸ *Plug and Play Order & Second Further Notice* at ¶ 76.

¹⁹ *Id.* at ¶ 83.

²⁰ Petition for Reconsideration of DIRECTV, Inc., CS Docket No. 97-80, PP Docket No. 00-67 (Dec. 29, 2003), at 7-8.

²¹ *Plug and Play Order & Second Further Notice* at ¶ 78.

²² Comments of EchoStar Satellite, LLC, CS Docket No. 97-80, PP Docket No. 00-67 (Jan. 14, 2004), at 5.

²³ www.cablelabs.com.

such a case. To the contrary, CableLabs will have both the incentive and the ability to hinder or prevent entirely the ability of DBS operators and other emerging MVPD competitors to deploy such technology.

In analogous contexts, such as program access, the Commission has been extremely wary of the harm to non-cable MVPDs specifically and MVPD competition generally that can flow from setting up a cable-affiliated gatekeeper to an important input.²⁴ The Commission should be similarly cautious here. The Commission's most recent competitive assessment of the MVPD marketplace has determined that cable operators continue to dominate the MVPD market with a 75% share.²⁵ It will not serve the interests of MVPD competition to install the cable industry's wholly-owned affiliate as a bottleneck to the approval and deployment of new technologies that would have a direct impact on non-cable MVPD competitors. Thus, DIRECTV strongly urges that instead, a qualified, independent third party entity be chosen or established for the purpose of serving as the sole initial arbiter of outputs and associated content protection technologies.

²⁴ See, e.g., *Program Access Extension Order* at ¶ 4 (stating that an "MVPD's ability to provide service that is competitive with an incumbent cable operator is significantly harmed if denied access to 'must have' vertically integrated programming for which there are no good substitutes" and finding that "vertically integrated programmers retain the incentive to favor their affiliated cable operators over competitive MVPDs such that competition and diversity in the distribution of video programming would not be preserved and protected"); *In the Matter of Implementation of Sections 12 and 19 of the Cable Television Consumer Protection Competition Act of 1992*, Memorandum Opinion and Order on Reconsideration of the First Report and Order, 10 FCC Rcd 3105, 3123 (1994), ¶ 35 (citations omitted) ("The legislative history of Section 628 specifically, and of the 1992 Cable Act in general, reveals that Congress was concerned with market power abuses exercised by cable operators and their affiliated program suppliers that would deny programming to non-cable technologies.").

²⁵ See *In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Tenth Annual Report*, MB Docket No. 03-172 (rel. Jan. 28, 2004), at ¶¶ 124, 4.

IV. THE COMMISSION SHOULD PERMIT THE MARKETPLACE TO CONTINUE TO DEVELOP STANDARDS AND PROCEDURES FOR THE APPROVAL OF OR REMEDIAL MEASURES ASSOCIATED WITH NEW CONNECTORS AND CONTENT PROTECTION TECHNOLOGIES

The *Plug and Play Order and Second Further Notice* poses several questions related to whether the Commission should adopt standards for the approval of new connectors or content protection technologies to be used with digital cable televisions and products, and if so, what those particular standards and approaches should be.²⁶ DIRECTV strongly believes that the Commission should allow the approval of such new connectors and technologies to continue to be driven by market forces.

Of the two common digital consumer electronics interfaces and the two associated content protections technologies, three – DTCP, DVI/HDMI and HDCP – were developed by industry consortia and not by standards-setting bodies. The Commission should encourage such innovation to continue, and not assume the role of dictating the selection of new connector and content protection technologies in the MVPD marketplace. Indeed, it would be difficult and impractical for the Commission to quickly or efficiently codify objective approval criteria into its rules while technology and capabilities are moving and evolving so quickly in this area. Objective criteria adopted today would become irrelevant in the near- to mid-term.

For similar reasons, it would be extremely problematic for the Commission to set standards for revocation to address instances in which the security of approved connectors or content protection technologies is compromised.²⁷ It is difficult to predict the extent or nature of security problems in advance, or the appropriate remedies for such problems. It would not be wise policy to pre-ordain any solution or trigger for remedies that inherently depend on the specific facts and circumstances, and specific features of a particular technology. The

²⁶ *Plug and Play Order and Second Further Notice* at ¶¶ 83-84.

²⁷ *Id.* at ¶ 86.

Commission should grant the MVPD, consumer electronics and content industries the leeway to address such problems with maximum flexibility as they arise.

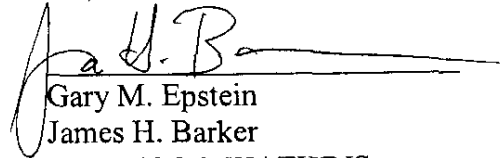
V. CONCLUSION

DIRECTV respectfully requests that the Commission act in accordance with DIRECTV's recommendations above, which DIRECTV believes are important to accelerate the digital transition. The Commission should permit the down-resolution of non-broadcast MVPD programming; install an independent third-party rather than the biased CableLabs as the gatekeeper to new outputs and content protection technologies; and, at least for now, permit the marketplace to address the approval process for new outputs and content protection technologies.

Respectfully submitted,

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